

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#4

IN THE APPLICATION OF:

PAUL E. ADAMS, CRAIG D. TIPTON, SHREYASI LAHIRI, AND JAMES H. BUSH

DOCKET No.: 3190R-02

CUSTOMER NUMBER: 26645

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FILED: HERewith

TITLE: FRICTION MODIFIERS FOR IMPROVED SHUDDER PERFORMANCE AND  
HIGH STATIC FRICTION IN TRANSMISSION FLUIDS

Wickliffe, Ohio

Dated: January 10, 2005

Hon. Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

INFORMATION DISCLOSURE STATEMENT

Prior to a first office action on the above case, the Examiner's attention is directed to the following items which may be relevant to the examination. Copies of each of the published documents, other than U.S. patent publications, copies of which are not required, are attached (or an abstract where that is all that is available to the Under- signed), as well as a completed form USPTO-1449. The Examiner is requested to ignore any extraneous markings that may be found on such items. The listing of any item herein is not intended as an admission that that item legally qualifies as "prior art."

The following documents were cited in the International Search Report:

US Patent 4,786,426, Gemmill, November 22, 1988.

US Patent 4,208,293, Zaweski, June 17, 1980.

US Patent 4,293,432, Papay, October 6, 1981.

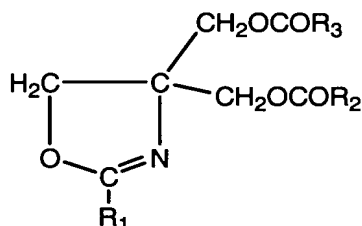
US Patent 4,886,612, Hikagi, December 12, 1989.

US Patent 3,966,620, Bridger, June 29, 1976.

US Patent 4,153,566, Ryer, May 8, 1979.

I certify that this correspondence is being deposited with the United States Postal Service as ☐ first class ☒ express mail in an envelope addressed to Commissioner for Patents POBox 1450 Alexandria VA 22313-1450[Exp Mail EVK 739 455 45] or ☐ is being transmitted by facsimile to the United States Patent and Trademark Office  
on January 11, 2005 By: Teri Pecjak

**French Patent 70.06883**, November 12, 1971 (no English equivalent available) is believed to disclose new thermally stable diesters derived from amino-2-hydroxymethyl-2-propanediol-1,3 (abstract). It also is believed to disclose (claim 8) use of mixtures of diesters as lubricants or essential constituents of lubricating oils. Claim 1 is believed to disclose new diesters characterized in that they correspond to the formula



in which  $\text{R}_1$ ,  $\text{R}_2$ ,  $\text{R}_3$  are linear or branched aliphatic radicals ... where the number of carbon atoms in the principal chain is at least 5 and at most 15. In claim 2, the number of carbon atoms in the principal chain is 6 to 16. These materials can be used as thermostable lubricants for turbojets [?] flying above mach 2 (page 1)

A machine translation of claim 1 reads as follows:

"New diesters characterized in what they answer formula

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in which  $\text{R}_1$ ,  $\text{R}_2$ ,  $\text{R}_3$  are aliphatic radicals linear or ramified on the carbon attached to the cycle for  $\text{R}_1$  and on carbons in alpha of carbonyls for  $\text{R}_2$  and  $\text{R}_3$ , of which the number of carbon atoms on the chains principal is at least equal to 5 and most equal to 15.")

**French Patent 1 462 248**, November 7, 1966. (no English equivalent) is believed to disclose compositions of detergent lubricant oils. These include the product of the reaction obtained by reacting (a) an alkenyl composition such as an alkenyl succinic anhydride or acid, with (b) an alkanolamine of the formula  $(\text{R}')_{3-n}\text{N}-(\text{R}-\text{OH})_n$  wherein  $\text{R}$  is an alkylene radical of 2 to 5 C and  $\text{R}'$  is hydrogen, an aliphatic group of 1 to 18 C, or others. (claim 1).

The International Search Report, a copy of which is believed to be available to the Examiner will provide further indication of the pertinence of the cited documents.

The following additional documents are cited as of possible interest:

**US Patent 6,077,445**, Bloch et al., June 20, 2000.

**US Patent 5,780,401**, Steckel, July 14, 1998.

**US Patent 5,484,543** Chandler et al., January 16, 1996.

**US Patent 5,336,439**, Forsberg, August 9, 1994.

**US Patent 5,282,991**, Waddoups et al., February 1, 1994.

**US Patent 4,479,888**, Koch et al., October 30, 1984.

**US Patent 4,253,982**, Bridger et al., March 3, 1981.

**US Patent 3,634,256**, Bickham, January 11, 1972.

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**US Patent 3,275,559**, Henry et al., September 27, 1966.

**US Patent 3,156,653**, Foehr, November 10, 1964.

Any required fees or any deficiency or overpayment in fees should be charged or credited to deposit account 12-2275 (The Lubrizol Corporation).

Respectfully submitted,



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Sheet 1 of 1

<b>FORM PTO-1449</b> (Rev. 6-89)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. <b>3190R-01</b>		SERIAL NO.	
<b>INFORMATION DISCLOSURE</b> <b>STATEMENT BY APPLICANT</b> (Use several sheets if necessary)				APPLICANT <b>Paul E. Adams et al.</b>			
				FILING DATE <b>Herewith</b>		GROUP	

U.S. PATENT DOCUMENTS						
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	4,786,426	Nov. 22, 1988	Gemmill			
	4,208,293	June 17, 1980	Zaweski			
	4,293,432	Oct. 6, 1981	Papay			
	4,886,612	Dec. 12, 1989	Hikagi			
	3,966,620	June 29, 1976	Bridger			
	4,153,566	May 8, 1979	Ryer			
	6,077,445	June 20, 2000	Bloch et al.			
	5,780,401	July 14, 1998	Steckel			
	5,484,543	Jan. 16, 1996	Chandler et al.			
	5,336,439	Feb. 1, 1994	Forsberg			
	5,282,991	Feb. 1, 1994	Waddoups et al.			
	4,479,888	Oct. 30, 1984	Koch et al.			
	4,253,982	March 3, 1981	Bridger et al.			
	3,634,256	Jan. 11, 1972	Bickham			
	3,275,559	Sept. 27, 1966	Henry et al.			
	3,156,653	Nov. 10, 1964	Foehr			

FOREIGN PATENT DOCUMENTS							
DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION		
70.06883	Nov. 12, 1971	France			YES	NO	
1 462 248	Nov. 7, 1966	France				X	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	

EXAMINER	DATE CONSIDERED
<small>EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</small>	